DOCUMENT RESUME

ED 421 845 EC 306 617

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TITLE Hidden Uses of Presentation Software--The Ideal Tool for Making Customized Materials for Special Needs Students and Clients.

PUB DATE 1998-00-00

NOTE 6p.; Paper presented at the California State University-Northridge Conference (Los Angeles, CA, March 1998).

AVAILABLE FROM http://www.dinf.org/csun_98/csun98_133htm

PUB TYPE Guides - Non-Classroom (055) -- Speeches/Meeting Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Adults; Art Therapy; Classroom Techniques; *Computer Assisted Instruction; *Computer Graphics; *Computer Software; *Disabilities; Elementary Secondary Education; Special Needs Students; Teaching Methods; Visual Impairments; Visual Perception; Visual Stimuli

IDENTIFIERS *Microsoft PowerPoint

ABSTRACT

This paper discusses how presentation software can be used to design custom materials for a variety of people with special needs, including children and adults with low vision, people with developmental disabilities, and stroke patients with cognitive impairments. Benefits of using presentation software include: (1) presentation software gives the user enormous amount of easy control over the information displayed and allows users to insert desired text, graphics, and photographs, and determine when and where they are to appear; (2) it can enhance the visibility of materials to address the individual needs of low vision viewers; (3) PowerPoint lets users manipulate contrast by using black and white, shades of gray, or color combinations to address various visual disorders; (4) sound can be incorporated into presentations; (5) graphics can be used to focus students' attention and stimulate discussion; (6) PowerPoint can be used to flash text or graphics at any of three speeds; (7) PowerPoint can be used to display presentation slides on a large screen or monitor to provide a way to discuss information with an entire class; and (8) results of art therapy can be scanned, incorporated into a presentation file, and then featured in a variety of formats. (CR)

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Hidden Uses of Presentation Software -- The Ideal Tool for Making Customized Materials for Special Needs Students and Clients

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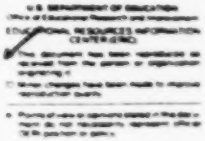

OVERVIEW

Do you wish you could find just the right text and graphics materials to meet your students' or clients' needs, ability levels, and interests? Is it difficult to find visuals that are age-appropriate? Do you know just what you want but are reluctant to make your own materials because drawing is "not your thing"? The solution to these problems is probably right at hand in the form of presentation software. Presentation software such as PowerPoint (part of the Microsoft Office Suite) contain the basic tools you need to make unique, professional-looking, customized materials.

The term "presentation software" is very misleading. It refers to using these programs to make a sequence of visuals which are projected onto a screen to help clarify or demonstrate the points made during a speech. But this narrow focus does major disservice to the flexibility and versatility of these applications. Presentation software is also an excellent tool for making a host of hard copy printouts, multimedia lessons, rehabilitation materials, and even interactive games.

This talk will demonstrate how presentation software can be used to design custom materials for a variety of special needs people including children and adults with low vision, people with developmental disabilities, and stroke patients with cognitive impairment. It will show how presentation software can be used as a tool to create various final formats such as handouts, awards, bookmarks, posters, slides, overhead transparencies, electronic interactive games and lessons, multimedia presentations, and kiosk presentations.

WHAT MAKES PRESENTATION SOFTWARE SO VERSATILE?

Presentation software gives the user an enormous amount of easy control over the information displayed. It allows you to insert your choice of text, graphics, and photographs, and determine when and where they are to appear. In addition, you can enlive your visual materials by adding sound and animation, designing interactive buttons, and showing an unlimited series of screens in sequence. By customizing these various parameters, you may be able to design materials that pinpoint your needs more precisely than materials you could find on the commercial market.

ENHANCING GRAPHICS FOR LOW VISION ACCESS

It is not uncommon for audiences with normal vision to have difficulty seeing the text and graphics

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displayed on a screen during a presentation. Not only can a little planning remedy this problem, but the thoughtful designer can even enhance the visibility of materials to address the individual needs of low vision viewers. For example, magnification can be obtained by displaying text as a larger font and/or as "bold," graphics can be enlarged to fill the entire screen (or even larger), and lines can be made thicker.

The importance of good contrast is often overlooked, yet poor contrast sensitivity is a frequent complaint of many people with low vision, especially in older age groups. While it is generally not possible to control contrast in the real world, it is easily enhanced in computer graphics. PowerPoint lets you manipulate contrast by using black and white, shades of gray, or various color combinations. Displaying bright, bold colors for text and graphics against a pale background - or vice versa - can make the difference between legible and illegible text for some individuals. This obtains no matter what the display medium -- that is, it holds true for visuals displayed on a computer monitor, TV screen, projection screen, transparent film, or paper.

The ability to control color per se adds yet another important advantage to customizing materials for people with low vision. Various visual disorders are associated with a unique pattern of differential reduction in color sensitivity. PowerPoint provides a neat way of getting around this problem. It allows the user to specify the colors of the graphic components made with its built-in drawing tools or from vector-based clipart. In fact, it is possible to make multiple copies of the same graphic, or even of an entire presentation, and then modify the colors to customize versions for different viewers.

Another way to increase the visibility of graphics for viewers with low vision is to avoid clutter. It is surprising to note how "busy" some screens are even when as part of applications designed for young children. Simplicity is generally appreciated by any audience, but mandatory for those with low vision. Since presentation software gives the designer great control over the content of each slide, the material can be as simple or complex as desired.

MULTIMEDIA: A MULTISENSORY ATTENTION-GETTER

Animation

PowerPoint provides animation tools which breathe life into static objects. Animation can generally make text and graphics more interesting and meaningful-and sometimes even inject humor into a presentation. You need no longer be tethered to using text or arrows to describe how the elements in your static graphics move; instead, you can actually demonstrate their motion. Examples in this presentation will include how to print block letters, the movement of water through the rain cycle, the proper way to brush teeth, and the concept of the preposition "through."

In some instances motion can be especially helpful in capturing the attention and maintaining the focus of individuals who have visual impairment, cognitive impairment, or attention deficit disorder.

Sound

Multisensory input seems to greatly enhance learning in some individuals. In PowerPoint sounds can be activated either in isolation or at the moment text or graphics appear on the screen. Sounds can be as short and simple as a "blip" or as long and complex as an entire symphony. Sources of sounds include PowerPoint itself, Windows 95, commercial software programs of sound clips, and recordings you can make yourself if your computer has a microphone and the necessary drivers.

Interaction

It is possible to design interactive buttons within a PowerPoint presentation. These allow you to branch to another slide or a different presentation. The innovative teacher can use this feature to develop simple interactive games to be played by an individual student or by the class as a group.

DESIGNING AGE-APPROPRIATE MATERIALS

Unless you can draw your own illustrations, your source of graphics will be clipart, stock photographs, and pictures that you scan in. Until recently most clipart had a cartoon-like appearance and looked as if it were drawn by one artist. As time goes on, however, clipart is becoming more varied in both style and subject matter. Software packages containing tens of thousands (in fact even hundreds of thousands) of quality clipart pictures are now commercially available. Thus your chances of finding pictures which are appropriate both in topic and tone are improving. But if even the best clipart you can find falls short of your specialized needs, you may be able to modify it into perfection. If it is vector-based you can delete some parts, add elements from other clipart pictures, and recolor components as desired. Recoloring is especially useful for varying skin tones, for making graphics look more age appropriate, and for making pictures easier to see.

It is not uncommon for adults who experience cognitive impairment as the result of a stroke or other trauma, to feel embarrassed about having to relearn simple concepts such as spatial relations or the meanings of simple words. Some of these individuals find using a computer during therapy very appealing as it adds a degree of maturity to these activities.

SOME UNORTHODOX APPLICATIONS OF POWERPOINT

Using Graphics to Focus Attention and Stimulate Discussion

Visual materials may help your student or client stay focused on a particular topic. Pictures make the information more concrete and memorable, and help spark new ideas. For example, a session on realistic employment options might include pictures depicting different vocations. Graphic representations of an impressively broad range of occupations are now available in clipart.

Children especially enjoy looking at pictures. You can add the elements of anticipation and surprise by designing a presentation that uses a "magic mirror." Between your knowledge of the individuals with whom you work and the technology in your computer, you will be able to give your "mirror" (that is, a picture of a mirror) the "power" to reveal wonderful things. For example, it might mysteriously be able to display the name of someone who is having a birthday, or unfold a picture which reveals where the group will be going for a field trip the following week.

Pictures can also serve as a springboard for children to express their ideas, verbalize their fears, state their approach to solving problems, etc. Clipart of scenes involving youngsters in various situations such as being consoled by a police officer (was the child lost?), or surreptitiously removing a gift from a high shelf (is she stealing?), could serve well in this capacity.

Moving Into the Abstract: 2-D Representations of 3-D Objects

There are some concepts that lend themselves beautifully to graphical representation. Naming objects, identifying actions, understanding basic spatial concepts, and dealing with the meanings of prepositions are prime examples. Some clients, such as stroke patients who need to relearn object names or spatial concepts, may initially need to work with actual 3-D objects in different juxtapositions. Once progress has been made with such concrete stimuli, the next step might be to work on these same concepts represented by photographs, and finally presented on a screen or paper as 2-D graphics.

But presentation software goes beyond both static displays and even animated graphics. It also lets you design materials with which your students or clients play an active role. For example, if the user can perform a drag and drop operation on the computer, consider designing a slide containing several object combinations that are scattered around the screen. The task would be to drag the objects so they are paired appropriately. A still more sophisticated approach is to design interactive buttons, each associated with a right or wrong answer. Clicking a button would result in the appropriate feedback, e.g. a smiley face and applause for a correct answer, and a frown for an incorrect response.

Lessons on learning manual alphabets and other symbol systems or codes also lend themselves to the

medium of presentation software. The uses of drag and drop or interactive buttons described above can also be used for this type of material.

Visual Perception

Some individuals may be able to name pictures, but only if they stare at them at length. In PowerPoint you can flash text or graphics at any of three speeds. This feature can be turned into a game or exercise to develop the skill of rapidly identifying objects. The difficulty of this task can be varied even further by sometimes presenting the flashed object in a nonsensical context, against a busy background. For example, flashing a cat so it is seated on a windowsill might make it easier to identify than flashing it seated in the middle of a pond or among a cluttered collection of clothing.

Tracking Progress

You can supplement conventional lists of items such as skills mastered vs. skills to be learned in a variety of creative ways using presentation software. For example, you can store the items in "magic" suitcases or boxes with labels such as "Sounds Mastered" or "Exercises to Do." These containers are "magic" because no matter how much you put in them, they never fill up. Your containers don't even have to be opaque; feel free to make them semitransparent so everyone can see their contents.

Another approach to keeping track of tasks completed vs. those yet-to-be done is to store the items behind closed doors that can slide open to reveal the collections.

SOME UNORTHODOX FORMATS OF POWERPOINT

Visuals for the Entire Group

Presentation slides (the individual screen-pictures of a presentation) displayed on a large screen or monitor provide a way to discuss information with an entire class. When desired, the teacher may even be able to supplement the pictures or charts in a textbook or informational pamphlet by making slides that portray the same information but in a simpler, easier-to-see format. Displaying such information on a large screen presents images that are bigger, brighter, and more dramatic than those on the printed page. The screen display also allows the instructor to point out specific features to the entire class or therapy group. A drawing tool is available to help focus attention on particular items on the screen. It lets you draw freehand in real time right during a presentation so you can underline or circle items right on the current slide - and in a variety of colors.

Accolades in Front of an Audience

To be "patted on the back" in front of one's peers is a powerful and positive experience. Presentation software provides an especially memorable means of congratulating a student or client in front of the entire group. Even if the name of the honoree is not known until the last moment, it quickly can be inserted in seconds into a slide prepared in advance.

Hard Copy

One of presentation software's most powerful and yet generally overlooked features is its ability to let you easily design hard copy materials. Combine that with today's new generation of inexpensive color printers, and you can generate your own professional-looking, custom materials as needed. Your handouts, assignments, awards, certificates, bookmarks, announcements, bulletin board graphics, etc., can say exactly what you want, including displaying the names of your students and clients.

A New Way to Display the Results of Art Therapy

The art done by your students and clients can be scanned in, incorporated in a presentation file, and then featured in a variety of formats. It is even possible to combine original art with clipart to form a new

creation. Then, to enhance its elegance, adorn the work with an "electronic frame." Clipart offers a wide selection of frames and borders which can be resized to fit the scanned images (which can also be resized). The final masterpiece can then be displayed electronically via computer, or printed out as hard copy.

CONCLUSION

Presentation software extends a large amount of control over graphic parameters. This can be extremely important for professionals who work with special needs children and adults. A little well placed know-how and creativity can turn presentation software into a surprisingly versatile tool. The result is an economical way for teachers and therapists to design the unique materials they want for their students and clients, make lessons more accessible for individuals with low vision, and generate materials in a wide variety of formats.